

ABSTRACT OF THE DISCLOSURE

5 An acoustic transducer includes an acoustic pulse generator, an impedance matching layer, and a thermal management system. The thermal management system is mounted to the matching layer to transfer heat from the matching layer, and is formed of a high thermal conductivity material relative to the matching layer. The thermal management system is arranged along the matching layer such that substantial heat is transferred to the environment from the thermal management system without excessive temperature increase at the pulse generator.